CLAIMS

1. A method for generating tissue deformation information comprising:

acquiring echo signals for a plurality of beams and a plurality of range positions along ultrasonic beams in an area of interest to cover a spatial region;

determining a beam angle between the ultrasonic beams and a principle direction for local tissue deformation;

computing at least one angle corrected tissue deformation parameter along said principal direction for at least one spatial location; and

displaying at least one of the said angle corrected tissue deformation parameters on a display unit.

2. The method according to claim 1 wherein said ultrasonic beams are generated with a high lateral resolution inside said area of interest.

3. The method according to claim 1 wherein the said beam angle determination is computed based on a direction along and perpendicular to a user defined polygon.

4. The method according to claim 3 wherein the said computation of at least one angle corrected tissue deformation parameter comprises:

computing a radial velocity gradient radially along the ultrasound beam;

computing a lateral velocity gradient laterally between beams at a fixed range location; and

deriving angle corrected tissue deformation parameters as a linear combination of said radial and lateral velocity gradients determined by said beam angle.

5. The method according to claim 1 further comprising:

spatially averaging said radial and lateral velocity gradients.

6. The method according to claim 2 wherein changes in at least one of said angle corrected tissue deformation parameters is displayed as a function of time for a given anatomical location.

7. The method according to claim 2 wherein the said display is a M Mode display displaying at least one of said angle corrected tissue deformation parameters with time versus location on said user defined polygon.